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Releasing the power to everyone.

Twisting talk into data

Way back in the old days before integrated circuits,...no, farther than that,...before the Great Wall, before the Fertile Crescent, before even Adam and Eve–our ancestors learned how to send messages to each other using *non-verbal* signals such as smiles, frowns, slugs, and hugs.

Next, we somehow turned vocalizations into *speech*. What speech and non-verbal communication have in common is that they are time- and space-bound. Both the sender and receiver of a message have to be in the same place, at the same time, or communication is pretty much impossible.

Next, the *written* word appeared. Now a monument could carry a message through time. Now papyrus could be used to send insults to a distant enemy. The written word allowed messages to move through time and space without corruption. Because of the more persistent nature of the written word, we began to invest more care in written documents and these documents became more formal than spoken communications. Other enhancements to the written word, such as the printing press, photocopier, and Correct-O-Type, also followed.

The computer-based bulletin board is a medium of communication that is founded on the written word. Consequently, participants can be separated in both space and time. But the messages you find on bulletin boards usually resemble spoken conversations more than formal writing. And, though messages are informal, participants get no non-verbal cues from each other, unlike a real conversation. Bulletin board users can't look someone they meet in the eye, they can't see how old the person they're talking to is or what the person is wearing, and they can't hear the tone of the person's voice.

These elements combine to make computer-based bulletin boards a unique medium of communication. Compared to other media that rely on the *written* word, formality is low and spontaneity, feedback, and responsiveness are high. Compared to media that rely on the *spoken* word, the location in space and time of the parties to the conversation is inconsequential and the information content of the conversation is high. Compared to media that rely on *non-verbal* cues, stereotyping and discrimination are nonexistent and grouchiness and tactlessness are conspicuous.

Early bulletin board software simply allowed the posting and reading of public messages, much like school, office, or Laundromat bulletin boards. Often these public boards lived on the same computer system as private electronic mail software. Perhaps because of the influence of private mail, computer bulletin board users, unlike users of traditional bulletin boards, tended to respond to existing messages with new messages. Early bulletin board software gradually evolved to systems that made it easy to follow the "thread" of the conversations.

Each programmer followed his own instincts, however, and today we have several different types of computer-based bulletin boards. Programmers influenced by the electronic-mail model designed systems in which each message, although public, is addressed to a specific individual. Others left messages unaddressed, as on the traditional bulletin board.

Some systems automatically purge messages after a period of time--often about a week. Other systems, designed with the hope that the messages will form a solid database of information, retain all messages until they are deleted by the system operator.

Some systems use "linear threading," in which each message can have only one other message attached to it. Other systems use "tree threading," in which each message can have any number of other messages attached to it. Linear threading forces each user to read the whole thread before adding a response. Tree threading allows users to respond to messages individually. Linear threading tends to cause respondents to be less redundant and more thoughtful, but linear systems are often perceived as limiting by people weaned on tree-threaded systems. In a tree-threaded system, a single message can spawn many threads, and any of those threads can start many threads of its own. This less-structured approach is more like a real conversation. On the other hand, it's difficult to organize these constantly digressing messages in any useful way so that they can become a database of information.

The bulletin board software that GEnie, ***Open-Apple's*** ally in the world of online communications, has devised for its RoundTables is based on the archival, linear-threaded model. All messages are posted to a topic, never to an individual. GEnie envisions private electronic mail as the appropriate medium for communicating with individuals.

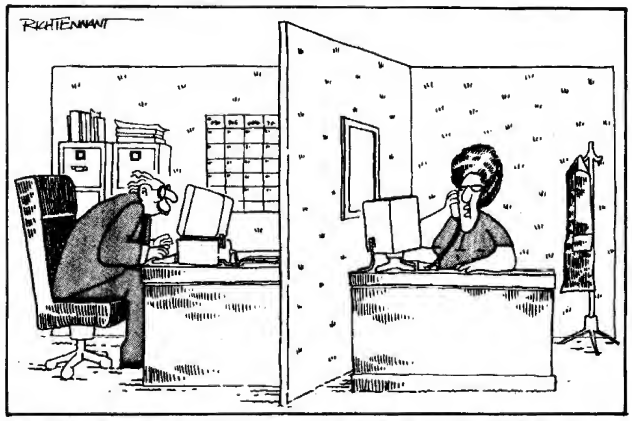
Each bulletin board on GEnie (there's one in each RoundTable and there are many RoundTables) is organized by category, and each category is split into a number of topics. It's easy to think of the categories as different rooms and of the topics as separate conversations.

GEnie's software never automatically purges messages. Each message is available to all until the original sender or the board's sysop or editor deletes it. When properly maintained by an editor, topics begin with older messages that contain good, solid information, while the newer messages closer to the bleeding edge of reality contain more tentative information.

Anyone can start a new topic of conversation at any time. If replies to an existing topic start to wander, the board's editor is supposed to move the wandering messages to a new topic.

There are two basic strategies for using the bulletin boards in GEnie's RoundTables. One is for people who are looking for a particular piece of information. The other is for people who are looking for good conversations.

Conversationalists come to their favorite RoundTables at least once



"I'M SORRY, BUT MR. HALLORAN IS BEING CHASED BY SIX MIDGETS WITH POISON BOOMERANGS THROUGH A MAZE IN THE DUNGEON OF A CASTLE. IF HE FINDS HIS WAY OUT AND GETS PAST THE MINOTAUR HE'LL CALL YOU RIGHT BACK; OTHERWISE TRY AGAIN THURSDAY."

a week--most come more often. GEnie's software keeps track of what messages they've already read; the conversationalists simply enter a command to read the new messages. Commands are provided for ignoring categories and topics that the conversationalist isn't interested in. The software displays the new messages topic-by-topic; at the end of each topic, the conversationalist gets a chance to add a message of his or her own. For a conversationalist, a bulletin board serves the same needs that a coffee shop or pub serves--interesting conversations among interesting people who share common interests and values.

People looking for a particular piece of information, on the other hand, do best by using a command that does a string search of all the existing topic headers. If no likely topic turns up, searchers should start a new topic and state, as precisely as possible, what their question is. On the other hand, if a suitable topic already exists, a searcher can read its messages. If what the searcher wanted to know is there, he or she has succeeded. If the facts aren't there, the searcher can add a message to the topic asking a question. Then the searcher comes back in 24 hours, sometimes less, sometimes more, and reads the new messages in the topic. Usually the conversationalists will have posted the answer the searcher was looking for or at will least have suggested other sources for an answer.

Apple II-based conversations on GEnie take place in several different RoundTables. The main one is known as The Apple II RoundTable, or "A2" for short. Typing "A2" at any GEnie page-numbered prompt will take you straight to this RoundTable. The A2 bulletin board has just undergone a major reorganization engineered by Chet Day, it's editor. Chet is a novelist, adventure-game programmer, high school English teacher, and veteran of the steamy subculture of bulletin board systems. He joined us on GEnie in March and has already had a terrific impact on how our conversations are organized.

Some of the most interesting conversations go on in our product support categories, where representatives of Apple II-related companies, such as Applied Engineering and Beagle Bros, drop by every day or so to answer questions about their products.

We don't have any conversations about programming going on in the Apple II RoundTable. That's because we have a separate RoundTable, "A2Pro" (The Apple II Programmers and Developers RoundTable), where all programming discussions (are supposed to) take place. We have some conversations going on in A2Pro about standards for the upcoming 65832 microprocessor. See Randy Hyde's letter in the March ***Open-Apple***, page 4.15, for background information.

If you'd like to join in the conversations on GEnie, either in the Apple II RoundTables or any of the other RoundTables (public issues, law, photography, gaming, religion--to name but a few), there are a few things you need to know.

First of all, whether you are using GEnie or another service, first learn how to use your communications software. Since the national services make you pay by the minute, find a free local bulletin board and begin by practicing reading messages there. Learn how to turn your "capture buffer" on and off, how to have the buffer's contents saved to disk automatically when the buffer is full, and how to read and print these saved files while you are "offline". Figure out how to tell your software that you want it to send, or upload, a text file to a remote computer so that the remote computer thinks you are typing it in. This is usually called something like a "prompted text-file transfer". I'm not talking about XMODEM or other protocol transfers here, just simple "make it look like I'm typing it" text files.

Secondly, whether you are using GEnie or another service, make sure what you've told the service about your own computer is correct. Almost every online system will ask you a few questions the first time you sign on. For example, GEnie asks how wide your screen is in characters, so that it can wrap the words it's sending to you in the right place. It asks how high your screen is in lines, so that it can stop and wait for you to finish reading after sending you a screen full. It asks what key you want to use to correct typing mistakes (Apple II users should select the back arrow--unfortunately, GEnie won't accept the ASCII code generated by the Delete key). Finally, it asks what key you want to use as a BREAK signal. A BREAK tells the host computer to stop sending what it's sending and to go back to the last command prompt. Some communications packages can generate a true, non-ASCII BREAK (233 milliseconds of zero bits). *Talk Is Cheap*, for example, does this when you press open-apple-A. *Point To Point* does it when you press open-apple-7. *ProTERM* and *MouseTalk* use open-apple-B. If your software can't generate a real BREAK, (or if you can't remember how to do it) tell GEnie you want to use control-C as your break signal.

People who give the wrong answers to these questions blame their online service for all sorts of weird happenings. If BREAK doesn't break for you, or if words are wrapping in the wrong place on your screen, or if the messages you write look like you don't know how to spell or type because you can't correct them, you've probably got a bad setting. In this case, or if you simply decide to change something, enter "SETUP" at any GEnie page-numbered prompt.

On your first visit to any of GEnie's RoundTables, I recommend that you immediately visit the bulletin board. When you enter the bulletin board you'll get a menu. At the bottom of the menu is a prompt. The whole process looks like this:

```
GEnie              A2          Page 645
        Apple II RoundTable
       Library: ALL Libraries          (This is the main Apple II
                                            RoundTable menu.)
 1. Bulletin Board
 2. Real Time Conference
 3. Software Libraries
 4. About the RoundTable
 5. RoundTable News              880406
Enter #, <P>revious, or <H>elp?1         (Choice 1 takes you to the
                                            bulletin board.)

GEnie
  Apple II Bulletin Board
Hello Jack Sprat
Enjoy your first session on the Roundtable
Category  1 Make Yourself at Home
 1 CATegories        10 INDex of topics
 2 NEW messages      11 SEArch topics
 3 SET category      12 DELete message
 4 DEScribe category 13 IGNore category
 5 TOPic list        14 PROmpt setting
 6 BROwse new msgs   15 SCRoll setting
 7 READ a messages   16 NAMe used in BB
 8 REPly to a topic  17 EXIt exits the BB
 9 STArt a topic     18 HELp of commands
Enter #, <Command> or <HEL>p
1 ?
```

The first thing you want to do is get rid of that bulletin board menu. It gives no indication of what the listed commands actually do or which ones are worth using. Believe me, it is far more trouble than it's worth. I know it may seem scary, but right down there after that question mark enter:

```
1 ?prompt none
Prompt type permanently set
```

You and I both know that if that command really did what it says, the prompt would disappear and the menu would remain. However, the opposite is what really happens. I feel better already.

Next, figure out what your friends call you and tell it to the bulletin board software. The command you use for this is NAME:

```
1 ?name
Name currently reads: J.SPRAT
Enter Nickname (Maximum 12 chars) ?lean
Name now reads: J.SPRAT [lean]
```

You get the chance to enter up to 12 characters and spaces. Any messages you leave in the bulletin board will automatically include your GEnie mail address--appended to that will be the nickname you gave. Here, for example, is a small message segment I recently downloaded from A2Pro, with apologies to David Ely, whose friends call him "Dave":

```
Category   2 Programming in 8-bit Apple II Assembler
**********
Topic 19        Wed Mar 23, 1988
DDELY [Dave]                at 23:37 EST
Sub: 65C02 Commands

We need an area to discuss the opcodes specific to the '802. I do anyway.
1 new messages
**********
----------
Category 2,  Topic 19
Message 8         Fri Apr 08, 1988
DDELY [Dave]                at 06:01 EDT

Boy, what a bone head. Thanks guys. I completely missed that immediate mode
BIT instruction. I'll have to try that one out!

             #> Dave <#
----------
```

I obtained this particular message segment while I was reading new messages. This was the first new message I encountered on April 9th in A2Pro's Category 2. When there is a new message in a category you first see the category name, followed by a short burst of asterisks.

Next comes the topic header, which includes the topic number and name, the date and time it was started, and the name of the person who started it. Next you'll often see a one to three line description of the topic, although we discourage these, as I'll discuss some other time. Then comes a short line about how many new messages have been added to the topic and another burst of asterisks.

Finally comes the message itself. It begins with its category, topic, and message number (notice that this message is number 8--I had encountered the previous seven on previous days), the mail address and 12-character NAME of the person who left it, the date and time it was left, and the message. Messages have no known maximum length, although messages over 30 to 40 lines long are discouraged (put them in the library). The message ends with a burst of hyphens. If there had been another new message, it would follow.

You can give yourself a different name in every RoundTable you frequent, if you want to. Your mail address will always be the same, however, so don't think you'll be able to fool us.

The third command you want to enter on your initial visit to a GEnie bulletin board is IGNORE ALL. This command takes a few minutes, so go outside and run around your house a couple of times after you enter it. You computer users need the exercise. What this command does is zip through the bulletin board and mark all the existing messages so it looks like you've already read them. Now, next time you come in, you can easily find just the new messages and walk into the middle of all kinds of conversations.

(If you're not sure you'll be back within 30 days, however, you can skip IGNORE ALL. If you're gone for more than 30 days the system automatically throws out all your markers and forgets you ever existed. It turns out that the files that remember who's read what are several times larger than the message files themselves. So, the markers of users who appear to be inactive are purged every day to save disk space. Occasionally people find their markers have been thrown out even before 30 days. If this happens to you, send a note to me (UNCLE-DOS) or Chet (A2.CHET) so we can help GEnie's wizards track that bug down.)

Now that you've settled in, let's take a look at how you go about reading conversations you might be interested in. Enter this command:

```
1 ?cat
```

The bulletin board software will respond with a list of categories. This list varies depending on which RoundTable you are in. Now, imagine you're in A2Pro and the category about 65816/65835 assembler standards is something you're interested in. After doing a CAT, you know it's number 15. If you'd like to see a list of the active topics in that category (active conversations in that room), enter the command SET 15, like this:

```
1 ?set 15

Category 15 New 65816/65832 Assembler Standards

15 ?
```

This changes your prompt from "1 ?" to "15 ?". The prompt tells you which category--which "room"--you are in. Next, enter the command TOPic. This will give you a list of topics in this category.

Occasionally, you might like to download a complete list of all the categories and each of their topics. The command for this is INDEX. Turn on your buffer and take a couple more laps--the list is always longer than I think it will be.

Now that you've found a topic you're interested in, you simply READ the messages in that topic. The READ command always assumes you want to read a topic in the SET category, and it always requires that you enter a topic number or a range of topic numbers. For example:

```
12 ?read 2          (read category 12, topic 2)
15 ?read 4-8        (read category 15, topics 4 thorough 8)
17 ?read all        (read category 17, all topics)
```

As implemented on GEnie, READ has a number of powerful optional parameters. I don't have room to tell you about them all here, but now that you know how to READ, look for more information on all this in A2's category 1, "Make Yourself At Home."

Now you know enough to get started. Get in there and start conversing.

Miscellanea

"What I would really like to seek your help on is finding ways to raise the priority and focus of the Apple II."

So said one of the speakers at a recent Apple User Group Advisory Council meeting--a gathering of Apple employees and 15 user group representatives. The speaker? John Sculley, Apple's President and CEO.

Sculley continued, "I expect to be selling II's at the end of the century. There is a lot of R&D money going towards the Apple II--it isn't all going to Macintosh."

Apple dropped the price of the Macintosh Plus in mid-March, making it a couple of hundred dollars cheaper than a color IIgs system. Apple said the cut was made to make the Macintosh more competitive in education and home-business markets. Cynics say that Apple is merely trying to get rid of its remaining inventory of the Macintosh Plus, which is no longer a big seller.

At the same time that Apple cut the price on the Mac Plus, it also effectively cut the price of the IIgs by $129, although its II-ignorant public relations department neglected to issue a press release on this one. The price cut came when Apple increased the minimum memory configuration of the IIgs to 512K without changing the price of the machine. Apple IIgs memory expansion cards, formerly a $129 item, are now shipped with all IIgs CPUs.

My advice to Sculley, if he's sincere about raising the priority and focus of the Apple II, is to encourage Apple's own employees to use them, even if they *are* more expensive than Macintoshes. The Apple II has been more highly esteemed outside Apple than inside Apple for an entire decade now. Yet the domination of the Macintosh inside Apple is total. Even Apple II technical notes are released on Macintosh disks.

Apple announced the opening of an employee child care center on March 31. "The child care center is designed to accommodate up to 70 infant, toddler, and preschool children ranging in age from six weeks to six years," Apple's press release announcing the opening said. The center "is technologically innovative, supplied with Macintosh computers for administrative functions and as a teacher resource tool and Apple IIc and Apple IIgs computers for child learning." Don't you think it's a shame that Apple tried to save a few bucks by giving its preschool teachers and administrators Macintoshes rather than the more appropriate Apple IIs they deserved? At least Apple knows better than to try to pawn Macintoshes off on the kids.

Apple has also announced a complete reorganization of its sales and marketing divisions. All sales and marketing efforts will

now take place in three distinct units, all reporting to Apple's chief operating officer, Del Yocam. The three units are Apple USA, Apple Europe, and Apple Pacific.

Charles Boesenberg will head Apple USA. That unit will be divided into six groups: Business Markets (business, government, home office), Apple Education (K through University), Marketing and Support (marketing communications, customer support, strategic alliances, market intelligence, U.S. field operations, and distribution), and Eastern, Western, and Central operations.

Michael H. Spindler will head Apple Europe from an office in Paris. That unit will be divided into four groups: France, Germany, Nordic, and General European Area. The Paris headquarters will include a regional R&D center to investigate European market requirements, improve localization, and provide greater customization of products.

David Hancock will head Apple Pacific. That unit will oversee operations in Canada, Japan, Australia, other Pacific rim countries, and Latin America.

Network news: the requirement that software be "AppleShare Aware" if you want it to work on an AppleTalk network turns out to be no big deal after all. In last month's article on AppleTalk's embrace of the Apple II, I reported that "none of today's software will actually run off the file server without some modifications." In fact, existing versions of many programs, such as the Beagle Bros Timeout series, function normally with AppleShare right now, whether executed from the file server or a local disk drive.

According to *Outside Apple*, Apple's monthly newsletter for developers, all a program has to do to be AppleShare Aware is:

```
* use the standard machine language interface (MLI)
    for all ProDOS calls.
* do not use the MLI READ_BLOCK or WRITE_BLOCK calls.
* do not hard code pathnames, directory names, volume names
    or slot and drive locations.
* leave interrupts enabled.
* provide unique file names for temporary files.
* avoid program overlays.
```

Even current versions of AppleWorks work on AppleShare, except for that part about unique file names for temporary files. If two AppleWorks users on the same network simultaneously try to save a file in the same directory, problems can result. AppleWorks always uses the name APPLEWORKS.TEMP when saving a file–if the save is successful it then renames APPLEWORKS.TEMP to the correct filename. During a simultaneous network save, one AppleWorks user could overwrite the other user's temporary file. Even as we speak, however, Claris really does have Rupert Lissner working on this problem and on other enhancements to AppleWorks. That, friends, is *good* news.

Speaking of AppleTalk, we've found some new network connectors that use modular telephone jacks just like the ones discussed here in March (page 4.11). These have the added advantage of costing half as much ($34.95 each). They are called Modunet connectors and come from a company called Data Spec. We liked them so much we decided to sell them. You can read all about them in the lower-right corner of the front page of our new book catalog, which was in the envelope with the issue you're reading.

Compared to the kinds of networks that businesses use, AppleTalk's major claim to fame is that it is inexpensive. However, in the Apple II world, AppleTalk walks with the price leaders. There are several ways to link Apple IIs to shared files on hard disks that cost less than AppleTalk. For more information, refer to "Other Networks," by Rod Williams, in the May *A+*, page 43. This issue of *A+* focused on Apple II networks, including AppleTalk and Omninet from Corvus, and was the first in Gary Little's reign as editor of the magazine. If all of Little's issues are as good as this one, I may have to drop my ***Open-Apple*** subscription and take *A+* instead.

Oh, but if I did I'd probably miss ***Open-Apple's*** additional details, such as an *even cheaper* file-sharing solution that *A+* missed. ***Open-Apple*** has a subscriber at Johnson Associates (P.O. Box 42073, Phoenix, AZ 85080 602-993-7440) who tells us that company offers a device that lets you hook four Apple IIs to a single Sider hard disk. If you already have the Sider, this system costs $715 for the base unit plus about $225 for each Apple II you want accessing the shared files. The system supports DOS 3.3 as well as ProDOS. The network devices can be chained together if you need to link more computers. If you need to link more than seven, however, the system starts getting as expensive as other network alternatives.

And speaking of AppleWorks, Data Disc International (1430 Willamatte, #577, Eugene, OR 97401) has released the second in what we can only hope will be a long series of AppleWorks-based social studies software packages. This second package is called *Nuclear Decisions II: 1980-1988.* (The first package, *The Power of Nation States,* was discussed at length here in September 1987, pages 3.58-59.)

Nuclear Decisions sets up a simulated "Conference on Nuclear Issues" with representatives from the United States and the Soviet Union (students). Each student gets a personal, AppleWorks-mail-merged letter (provided) from either the "Capitol Building" or the "Hall of the People" inviting them to participate in the conference. Each student is asked to prepare a "White Paper" on a specific historical or contemporary issue for the conference.

Background materials for the students to use in preparing their White Papers are included as part of the package. These materials, however, are "classified" and only available to students who have achieved the proper security clearance. Students raise their security clearance by doing well on tests (provided) that make sure the students can understand the vocabulary used in the materials. Students access the materials, which were developed by "high-level computer scientists" (the software's authors), using "top-secret computer systems" (your school's Apples).

As with *The Power of Nation States,* however, teachers who aren't comfortable with the simulation can dump it and use the materials in a more traditional manner by printing everything out in textbook format. One of the major benefits of AppleWorks-based materials like these is that each teacher can modify the package in whatever way he or she feels is appropriate. What Data Disc International actually creates are "Course Construction Sets".

Nuclear Decisions ($125), like *The Power of Nation States* ($95), is sold only by site license. Pay the fees and you get one copy of the disk and the right to make as many copies as one site requires. Data Disc also now has a demonstration disk that includes both programs, available free for the asking. I've uploaded the demonstration files to our library on GEnie–*Nuclear Decisions* is file #3978 and *The Power of Nation States* is file #3975.

And by the way, "The Birth of Data Disc International" is the lead article of the March issue of *The WORKS,* a newsletter for AppleWorks users in education. The story includes a group of social studies teachers unimpressed with *The Oregon Trail,* a school secretary who kept saying how interesting it would be to arrange the countries of the world by the number of people in the armed forces or by a country's Gross National Product, and a student who asked a question that the teacher's AppleWorks-prepared handout couldn't answer. Great article. Single issues of *The WORKS* are $3 (9-issue, one-year subscriptions are $19) from P.O. Box 72, Leetsdale, PA 15056.

Speaking of newsletters, *Open-Apple* subscriber Ross Lambert (P.O. Box 266, Unalakleet, Alaska 99684 907-624-3161) is starting a new newsletter for "the lowest end of the programmer spectrum–the folks who still need some pretty individualized help with 'old' technology, i.e. programming in Applesoft." Lambert has named his newsletter *Reboot* and has priced it at $20 a year. The price includes a free telephone hotline, if you don't mind calling Alaska long distance (and don't call in the morning–at 9 AM eastern time it's 5 AM in Unalakleet). Complete details are in *Reboot* Vol. 0, No. 0 (page 6) which is also free for the asking. There's something very familiar about this premier issue but I can't quite put my finger on what it is. Maybe it's the guy in the bottle on page 1 or the composite picture of 100 IBM users on page 2. (You can also contact Lambert on GEnie–his address is R.W.LAMBERT.)

One of the more interesting little programs to cross my desk the last few months has been *Fastdata Pro,* by Jim Hammond. In the most general sense, all this program does is the same kind of string search any standard word processor does. The big difference is that you don't have to load the file first–*Fastdata* searches through files while they're still on your disk. In addition, it searches *very* quickly and it will search through a whole list of files in one go.

It has a bunch of other features, such as the ability to cut and paste text from one file to another, to format and print selected text, and to search files of any type, including AppleWorks files. You can

use it with a word processor to create free-form databases. You can use it to search for "lost files" on a hard disk. But most of all, you can use it to search through indexes of Apple II publications that Hammond's company also sells. For example, an index to the 1985 and 1986 issues of ***Open-Apple*** is available for $10; 1987 for $6. One of these comes free with the main program, which is $49.95. It's also available in a DOS 3.3 version, which can search only text files, for $19 (Fastfind Co., 28503 Coveridge Dr, #R1, Rancho Palos Verdes, CA 90274 213-544-2350).

But when I showed *Fastdata Pro* to our technical expert Dennis Doms, he immediately shot back with, "*ProSEL* can do that, too." *ProSEL*, winner of ***Open-Apple's*** most-mentioned software package award, is constantly being updated by its author, Glen Bredon. A 1987 revision to *ProSEL's* FIND.FILE program gave it the ability to search for strings within files. It doesn't have all the bells and whistles of *Fastdata Pro*, but if you're already a *ProSEL* owner you can get an update to the program from Bredon for just $5 ($40 buys the whole package, if you don't have it yet just what are you waiting for? 521 State Road, Princeton, NJ 08540).

Other recent revisions include screen-blanking and head-parking features for the program selector itself that take effect when you leave your computer idle, slot/drive selections in CAT.DOCTOR, and an automatic specification generator for the PROSEL.EDITOR, which makes it easier to create program selector menus. Bredon keeps copies of his latest *ProSEL* revisions in the libraries on GEnie and CompuServe. These files are encrypted, however, and you must have an original disk with documentation files or you won't be able to unearth the password you need to decrypt them. You can find the files on GEnie by searching for all files with an uploader address of BREDON.

Applefest Boston. Hynes Convention Center, Friday, Saturday, and Sunday May 20-22. ***Open-Apple*** doesn't have a booth at this one, but GEnie is planning to have one and that's where I'll be hanging out. Stop by and say hello.

Books. As I mentioned back in February, (page 4.4) ***Open-Apple*** is jumping into the book business so that we can afford to give you the kind of service you expect on subscriptions. In this month's envelope you'll find our first book catalog and a new self-mailer you can use to send us book or subscription orders and payments. On the self-mailer, just above your name, is a box with a message. This message will vary from month to month–when your subscription gets close to expiration we'll warn you with a message in this box. Please glance there every month. Your expiration date is always shown to the right of your name.

The hottest book we have this month is Apple's *Programmer's Introduction to the Apple IIgs*. This is final book in Apple's series on the IIgs to be published and it is hot off the press. It comes with a 3.5 disk that includes the source code (in assembly, TML Pascal, and APW C) for the program examined in the book. You can get this book at your favorite bookstore for $32.95, or you can buy it from us for $26. As with all our books, our prices *include* surface shipping anywhere in the world.

Ask (or tell) Uncle DOS

Really, I don't do it on purpose. I know each of our April issues seems to have an abnormal number of bugs, but I don't know where they come from. Go find a pencil and your copy of last month's issue and let's straighten out a few things here.

The AppleWorks patch to avoid disabling of printer features at the end of a line (page 4.19) is missing half the required POKEs. Cross it out and point to the following:

```
Avoid disabling of features at end of line

BLOAD SEG.M1,T$00,A$2400,L$1000,B$871B

POKE 12574,44 : POKE 12154,44 :REM boldface
POKE 12579,44 : POKE 12157,44 :REM underline
POKE 12550,44 : POKE 12160,44 :REM superscript
POKE 12555,44 : POKE 12163,44 :REM subscript

BSAVE SEG.M1,T$00,A$2400,L$1000,B$871B
```

*On page 4.24 I said that Bob Garth is the author of the **ProLine** Bulletin Board system for the Apple II. Whoops. Garth's software is called **ProTree Elite. ProLine** was written by Morgan Davis of Living Legends Software. Other Apple II bulletin board software we know about: **GBBS Pro** by Lance Taylor-Warren of L&L Productions; **Prime** by Vince Cooper of Smokesignal Software; and **Let's Talk** by Steve Russ, now distributed by Pinpoint Software.*

And before you put that pencil away...

SCSI partitioning software

I have a correction to your last issue. I just purchased an Apple HD20SC with Apple's Revision C SCSI card. It came with an "Apple II SCSI Card Utilities Disk" that has a SCSI partitioning program (V 1.0), *Backup II* (V 1.1.1), and a SCSI hard disk testing program.

I have a question about *Backup II*. I have two Apple 3.5 drives attached to my IIgs, but *Backup II* only uses one of them to make a backup. Is there any way to get it to use both drives so I can save time when making backups?

Leon Munn
Inglewood, Calif.

*No sooner did we have last month's issue at the printer than one of our contacts at Apple called to say partitioning software would be distributed with the newest version of Apple's SCSI card. Based on information from another Apple contact, we said such software didn't exist in three different places last month, once on page 4.18 and twice on page 4.23. A third Apple contact rushed us a revision C ROM for our older SCSI card and the new SCSI utility disk after last month's **Open-Apple** hit Cupertino. We've tried the new ROM and software out with an upcoming SCSI hard disk we've been beta testing and we are smiling.*

***Backup II** does not support backups to multiple drives. The backup program in Glen Bredon's **ProSEL** package does, however. **ProSEL** will double the value of your new hard disk, see this month's Miscellanea for more.*

R fault

In "CHAIN, STORE bug fix", (March 1988, page 4.16), your patch to make the startup screen say "PRODOS BASIC 1.1R" actually puts the "R" as the first character on the next line, in front of the copyright notice. To put the "R" on the first line and center that line, do your patch and then also:

```
21A3:68    was 67
21AC:1E    was 1F
21AE:84    was 83
```

Robert J. Schack
New York, N.Y.

Control-@ problems, continued

Your suggestion of using an older version of AppleWorks to enter control-@ into SEG.PR (April, page 4.20) is *very* dangerous if the user has an Applied Engineering memory board. When AE's enhancement programs modify AppleWorks, changes are made to SEG.PR. The wrong set of changes can drop you out of the AppleWorks startup and into the monitor faster than you can hit control-reset.

William Shuff
Schenectady, N.Y.

I ran into AppleWorks' control-@ problem entering codes for a Star printer. I called Claris (very friendly, by the way). They did not recommend using an old version of AppleWorks to modify SEG.PR, but will send out a free disk with a patch for version 2.0 that will fix the problem.

Ted Swartz
Chicago, Ill.

We got a copy of the Claris patch through GEnie contacts. The heart of it goes:

```
BLOAD APLWORKS.SYSTEM,A$2000,L8531,T$FF
POKE 13057,112
POKE 11760,242
BSAVE APLWORKS.SYSTEM,A$2000,L8531,T$FF
```

Another way to overcome the control-@ problem is to use control-H (back arrow) instead. In binary, control-@ is "0000 0000" and control-H is "0000 1000." On the ImageWriter, the bit that is a 1 in control-H corresponds to dip switches that aren't used for anything. This trick may not work with other printers, but it works for getting slashed zeros on the ImageWriter (March, page 4.16).

Yvan Koenig
Vallauris, France

Two letters in your April issue had requests perfectly suited for JEM Software products. *PatchMania* allows control-@ to be freely entered in printer specifications and has a lot of other patches as well.

PathFinder greatly simplifies using subdirectories with AppleWorks, changing "hunt-and-peck" to "point-and-shoot". Each disk is $17.50 plus $2.50 shipping.

Randy Brandt
JEM Software
P.O. Box 20290
El Cajon, Calif. 92021

Publish It! & PostScript

I would like to correct two assumptions you made about the way *Publish It!* sends data to printers (March 1988, page 4.9).

First, while it's true that there are 760,320 possible dots on an 8 by 11 inch page when printing at 72 x 120 dots-per-inch, a typical page in *Publish It!* sends much less information to the printer. *Publish It!* has been optimized so that many white areas are not transmitted to the printer. This optimization, which many other graphics printing programs for the Apple II have not implemented, speeds printing.

Second, the *Publish It!* Laser Printer Accessory Pack, which will be available from TimeWorks by AppleFest in May, will use PostScript. The LaserWriter's PostScript fonts will be used where possible and 72 x 120 bit maps will be downloaded and smoothed for those typefaces that do not have a corresponding font in the LaserWriter. The print quality will be much higher and the printing speed much faster than you have indicated.

The *Publish It!* LaserWriter driver will work via AppleTalk from the IIgs and IIe (using Apple's new workstation card with the latter), and it will also work via a 9600/1200 baud serial connection from the IIe, IIc, or IIgs. Any Apple II that can run *Publish It!* will be able to print to the LaserWriter using PostScript.

Bruce D. Rosenblum
Project Manager
Turning Point Software
Boston, Mass.

Statistics, continued

Like Barry Dunayer (April, page 4.20), I am a scientist (biochemist) using a IIe and needing statistics support. After working on a computer other than an Apple with a commercial program that sells for over $1,000, I found that the results for one common test (the U test) commonly disagreed with those I worked out by hand. The company that markets the program was either unable or unwilling to describe the algorithm used in the program, claiming they had contracted the writing of the program from another company that no longer existed. Under those circumstances I couldn't trust any answers the program might give and proceeded to write my own statistics routines, this time for the IIe, which I have been using ever since.

In contrast to the above bad experience, I have obtained public domain statistics programs (e.g. Math & Statistics No. 059, 060, 061, 063 from Computer Learning Center) at $4 per disk-full that are completely no-frills, usually slow, and require running a different program for each test, but that give the right answers! Plus, they are completely listable and unprotected.

Phil Albro
Cary, N.C.

I also needed good statistical software and found that most of what I previewed was written in the late 70s and early 80s and would not take advantage of the extra memory present day computers have. (Beware of old wine in new wine skins--much of the software that is advertised to run the IIgs is still 48K-based).

I did find one package that would lend itself to modification, *App-Stat*, which you mentioned in April (page 4.21). It comes with Applesoft programs on a DOS 3.3 disk and can be retrofitted for ProDOS. It also comes with a 165-page binder-manual. My version was not copy-protected. It easily converts ASCII files to and from its format. It does the basic statistics, ANOVA/ANCOVA, repeated measures ANOVA, T-Tests, scattergrams, crosstabs, correlations, and multiple regression. With multiple regression, though, the removal or addition of indicators is not automatic.

There were some errors in four files--missing quotation marks and the like--that I found with Beagle Bros *D-Bug*. The programs used many arrays and numeric variables so I decided to compile the programs with the *Beagle Compiler*. I partitioned the memory for my Apple IIc's 1 meg Z-RAM II to 512K for arrays and strings and 512K for the programs. I transferred the programs to a 3.5 disk and wrote a menu that would transfer the 13 programs (some are chained) to memory. With my modifications I can now run stepwise multiple regression using 29 predictors and many hundreds of cases. This statistical procedure is one of the most involved for number crunching.

The results compare favorably with those from a mainframe--considering the single precision floating point numbers Applesoft uses. I limited the multiple regression predictors since I use the AppleWorks database for my data files and the database only has 30 fields. I could have used the spreadsheet to get more predictors, but then I would be limited to 999 cases. My modifications far exceed the limitations the *App-Stat* literature gives. *App-Stat* allows for data entry within the program, but I found AppleWorks much easier.

Thus, by using extra RAM, Applied Engineering software and hardware, the *Beagle Compiler*, AppleWorks, and a 3.5 UniDisk with an Apple IIc, I can do number crunching much easier than on a mainframe, and with accuracy and speed (no time-sharing and no wait for printouts) that rival a mainframe. The results are good enough for dissertation work or for journals.

I'd be glad to send the details of my modifications to other interested scientists.

John C. Magnan
Rt. 1, Box 145-D
Matthews, GA 30818

Apple II-aided design

A recent article in *Byte* ("A CAD for all incomes," Aug. 87, page 232) touts the capability of MS-DOS computers for computer-aided design. What we seek is Apple II capability to project compound curves--such as in boat design--but asking local experts always gets us a response that begins with "get rid of the Apple..."

V.J. Keenan
Analy-Syn Laboratories
Paoli, Penn.

See "Comparing Three CAD Programs" in the March and May 1987 ***Call -A.P.P.L.E.*** *(290 SW 43rd St, Renton, WA 98055 206-251-5222). The first three programs mentioned here are reviewed there, the fourth may also be worth investigating:*

CADDRAW ($60) 614-891-2111	Kitchen Sink Software 903 Knebworth Ct Westerville, OH 45081
discoverCAD ($209) 800-662-1000	Hearily & Co. P.O. Box 869 Springfield, OH 45501
MATC-CAD ($395) 414-278-6743	1015 N 6th St Milwaukee, WI 53203
CADApple ($395) 714-960-7720	Versacad Corp. 2124 Main St Huntington Beach, CA 92648

LISP & Prolog

Where can I get the languages LISP and Prolog for the Apple II?

Manuel Garcia
Fountain Valley, Calif.

Check out the programs listed below. We have a review copy of ***KeyLISP.*** *Dennis, who knows about such stuff, says it seems to be very good for a micro version. He says the manual is a good reference but you may need to get a general LISP text to augment the* ***KeyLISP*** *tutorial--he recommends* ***LISP,*** *by Winston and Horn, published by Addison-Wesley.*

MicroProlog *is the only version of Prolog we know of for the II; we haven't seen the product.*

KeyLISP ($149) 213-470-4663	XPrime Corp 10835 Santa Monica Blvd Los Angeles, CA 90025
MicroProlog ($99)	Programming Logic Systems 31 Crescent Dr Milford, CT 06460

In praise of Kermit

I found you article "Crossing telephones with computers" (March, pages 4.12-14) interesting, but you left out one of the most important communication packages available.

Kermit is a telecommunications package available for a variety of computers from Columbia University as freeware. The latest version I know of is 3.80. It works under either DOS 3.3 or ProDOS. Drivers are available for a number of serial cards. It includes built-in VT-52 and VT-100 terminal emulation. The only problem I have with it is that it doesn't quit properly.

You also should have mentioned a program named *BLU* by Floyd Zink, Jr. It is a very clean program for making Binary II files or extracting files from a Binary II file. It also allows for squeezing and unsqueezing files. It is also freeware. Both BLU and Kermit are available on CompuServe.

Alan B. Levy
Randolph, N.J.

We also have both programs available on GEnie. ***BLU*** *is essential--I'll talk about it at length when I get to uploading and downloading files. Version 2.27 is in our file #3480. We also have* ***Kermit 3.80,*** *in file #3419. It runs on any Apple II, but it doesn't support XMODEM file transfers.* ***Kermit*** *has its own transfer protocol, which is supported by many university-owned mainframes.*

Orange Micro converter limited

Lured by the promise of turning my Epson FX-85 into an ImageWriter to use with my IIgs, I bought one of those C/Mac/GS boxes you mentioned in March (page 4.10). At first all I got was gibberish, until I found that the C/Mac requires two stop bits instead of the one stop bit

required by ImageWriters (this is compatibility?)

The particular program I tested required the Epson, in ImageWriter mode, to do 1/144th inch linefeeds. Instead, it did 1/216th inch linefeeds, which is what the Epson usually does. The ImageWriter mode could not produce superscript or subscript text, either.

Obviously, the device is not truly compatible with the ImageWriter and I have returned it for refund. Perhaps Orange Micro, without saying so, intended it to be used only with Mac-clone software such as MultiScribe 3.0. It does indeed print graphics-based text.

Rick Pedley
Kingston, Ont.

The extra stop bit probably has no function other than to give Orange Micro's device a little extra time to process one character before the next one is at its door. The price of the device has also been raised from the $99 we quoted in March to $119.

Magic solution, continued

Regarding the cleaning of printer platens with rubbing alcohol ("And the magic solution is...," April, page 4.20): I used it for several years, but found it less than satisfactory, especially for removing ink. I asked a typewriter repairman what he used, and he said *denatured* alcohol. Available at your local pharmacy. It works much better than rubbing alcohol.

Stephen E. Bach
Scottsville, Va.

A company called Texwipe (P.O. Box 308, Upper Saddle River, N.J. 07458 201-327-9100) has a complete line of materials for cleaning printers and other computer equipment, including Rubber Roller Restorer, Correction Fluid Cleaner, dust-free clothes, and cleaning kits.

Jim Luther
Kansas City, Mo.

A fine grit emery cloth can be used with alcohol to remove the glaze that forms on printer platens and makes them too slick to advance the paper properly.

Tom Vanderpool
Kansas City, Mo.

I fixed my ImageWriter's problems with line-squashing, paper jamming, and streaking in graphics mode by replacing the mechanical paper-out sensor with an optical sensor that Apple has available. It cost about $14, plus the time it took to install it, plus $2 to a local electronic shop to solder a jumper wire. The part number on the kit box is 076-0250. The kit comes with a new paper guide (the long piece of curved black plastic under the platen), optical sensor and cable, a small logic board and a metal bracket to attach it to the printer's main logic board. You supply a one-inch piece on insulated wire. After converting to the optical sensor, everything seems to work fine again.

Sam Pemberton
Gallup, N.M.

For months I had been having the "first line squashing" problem with my C. Itoh printer. One day when I was very busy and had a lot of printing to do it groaned and moaned and finally died. A friendly repairman suggested that it might just need a cleaning and he told me what to do. After I cleaned and oiled it, it began to work better than it had in years. To my surprise, even the squashing problem disappeared.

Anne Bucher
Minden, Nev.

Copy II Plus praised

Anyone with an Apple IIgs and a 3.5 drive will want to update to version 8.2 of *Copy II Plus*. Not only does it provide a way to back up 3.5 disks, but it also includes enhancements that speed up the handling of 5.25 disk copying. The program uses the IIgs memory manager to acquire enough memory to copy a disk in one pass, if possible. Single-5.25-drive users no longer have to swap disks and have the option of making as many copies as they want from the image in RAM without rereading the source disk.

Registered owners may obtain an update to 8.2 on a 3.5 disk for $15. The full retail price is $39.95. It is often discounted to around $25. For details, contact Central Point Software at 9700 SW Capitol Hwy, Portland, OR 97219 503-244-5782.

Steve Bett
Columbus, Miss.

I read the Copy II Plus documentation for the first time last week (its been a few years...), and discovered that using the "copy disk" function to copy from a smaller to a larger volume results in an "image file" being saved.

So it should be possible to load Pascal v1.3 onto a 256K RAM disk, boot Copy II Plus, and save the entire Pascal system as one file. The next time you want to use Pascal, use "copy disk" to move it back, and boot from the RAM disk.

Andy McFadden
Sunnyvale, Calif.

*We knew about the "archive" feature of **Copy II Plus**, but we didn't know it worked on non-ProDOS disks. After seeing your mention of Pascal, Dennis tried it on a 5.25 CP/M disk. That works, too.*

What is a text file?

As a relative newcomer to Apple computing I find your newsletter both challenging and stimulating. There are certain concepts I have trouble with and I would appreciate your help in trying to understand the difference between a binary file and a text file.

For example, my word processor, *Bank Street Writer Plus*, saves work in BIN files. I assume this to mean it saves the binary representation of every letter typed at the keyboard. If I want a text file, I cannot "save" the file but must instead "print" the file to disk. Am I actually printing the alpha-numeric characters as though I were printing them on paper? When I load this text file into memory to be displayed on the screen, what sort of values are in memory?

Alan Zimbard
Scarsdale, N.Y.

It's easiest if you think of both your computer memory and your disks as consisting of thousands of memory cells. Each cell can hold eight "bits" of data (an eight-digit binary number), which translates into any decimal number between 0 and 255 inclusive. No matter whether a file is binary, text, system-related, or anything else, at its most basic level it's just a long series of numbers between 0 and 255.

ASCII (say ask-ee) is a standard code for representing alphanumeric characters using numbers in the 0 to 255 range. By common agreement, for example, "A" is "0100 0001" or decimal 65.

A "binary" file is the most general kind of disk file. In a sense, all files are binary files; TXT files are just binary files with special limits imposed on the data within them.

*What someone actually puts in a binary or text file **can be** anything and can represent anything. However, in general, what you find inside the cells of a text file are numbers that represent ASCII characters that represent information in a human-readable form.*

*Binary files typically contain information that's not in human-readable form. Sometimes, however, as in the case with your **Bank Street Writer** files, what's in the binary file is mostly ASCII codes representing what you've typed in. However, in addition to the ASCII text, these files will contain additional codes for things like margins, boldface, underlining, and so on. The ASCII standard doesn't include codes for things like this, so each programmer tends to use his own. Thus, the binary file has almost the same content as the equivalent text file, except for the extra codes embedded within it. Because the extra codes take the file beyond the limits of what is usually considered a "text" file, most programmers make files like this "binary" or some other file type.*

As for your printer and screen display, they are both mechanical devices that prefer to be served binary numbers. They have been trained to convert these into the alphanumeric characters you actually see on paper or on your screen, using the ASCII conversion code. Your computer never actually saves or prints or displays an "A" or a "B"; it always saves, prints, and displays long series of numbers between 0 and 255.

Speed and subdirectories

I have a program that displays a series of 153 "slides." I have tested the program with all of the slides in a single subdirectory and with the files split between six subdirectories. As you mentioned in relation to the *Finder* in February (page 4.5), putting fewer files in a larger number of subdirectories does increase file-access speed. Running from a 3.5 drive, the increase was 36 per cent. Running from a RAMdisk, however, the increase was only 5 per cent.

J.D. Holdeman
National Aeronautics and Space Administration
Cleveland, Ohio

IIc and RGB

Do you know where I can get the black box to connect a IIc to an RGB monitor?

W. Henry Linton, Jr.
Wilmington, Del.

*My advice is to avoid IIc RGB. The IIgs changed the way Apple IIs do RGB and IIe/IIc RGB is now obsolete. If you want both color and 80-column displays, I recommend you take a look at an Apple **composite** color monitor. You'll save lots of money, you'll have color, and you'll have readable 80-column displays only a smidge less sharp than what IIc RGB could give you. See the lead article in our October 1985 issue for more on Apple's unique composite color monitors.*

How do they do that?

How about letting us interested readers know how a program such as *MacroWorks* works. How does it hook into the AppleWorks input routine? How does it pass the input on to AppleWorks? Where are the AppleWorks input routines located for the various versions? How is it that after

that after *MacroWorks* has been added you still have a 55K desktop available on a standard IIe? How would you go about adding a small machine language program to AppleWorks that presently fits into the space at $300-3E7? Is that space still free or is it used by AppleWorks?

Neil K. Dawe
Qualicum Beach, B.C.

Nice string of questions. Unfortunately, for most of them the answer is 'I don't know.' I do know that if you're really interested, a lot of background information on this is available on Rupert Lissner's bulletin board, which I mentioned here in August 1987, page 3.55. Lissner doesn't give away the store, but he lays a lot of groundwork for those who want to enhance AppleWorks or just nose around. Our August discussion includes a description of the files available. Dennis squeezed and bunnied these files recently and uploaded them to GEnie's A2Pro library, where they are in file #311, APLWORKSDOC.BQY.

We do know that in virgin AppleWorks the $300 space is unused, but if you want to use AppleWorks in combination with any of the enhancement programs available you may run into conflicts. At this moment we don't know which ones use it and which ones don't.

AppleWorks, graphics, reset

I have made a little discovery regarding the bug that causes problems with graphics programs after exiting AppleWorks on the IIgs. Pressing control-reset will clear the problem up. Of course, if you're using *Finder* or *Launcher* or any of those other insanely slow program selectors, hitting control-reset will put you in the monitor. *ProSEL* recovers from a reset quite well, though. Incidentally, Checkmate's *ProTerm* communications software has the same bug. Otherwise, this is the best terminal program I've ever seen.

Dean Esmay
Flossmoor, Ill.

Old-time desk accessories

I came across some desk accessories on an old IIgs system disk, including a calculator, puzzle, and others. Nothing happens when I put them in the DESK.ACCS folder as you recommended in January (page 3.91). Can I convert them to the new format?

Montgomery A. Lee
Littleton, Colo.

You're probably talking about accessories you found in the /SYSTEM.DISK/DESKTOP/DESK.ACC folder. These are specific to the original ***Desktop*** *program that came with the IIgs. This is a ProDOS 8 program, originally called* ***MouseDesk,*** *and its accessories aren't compatible with ProDOS 16. Most, if not all, of these old accessories are duplicated by new freeware accessories for ProDOS 16 that we have available on GEnie and that your user group probably has in its library.*

Problems in Scandinavia

There was no slip about how to sign up with GEnie in my envelope. How long until GEnie is available here?

Apple Scandinavia has gone one step further than Apple U.S. in the don't-admit-there-is-a-computer-called-the-Apple-II-we-only-sell-Macs craze. They don't support the II at all–we II owners are left on our own. If you call Apple and ask something about the II they sometimes actually laugh at you for not having a Mac.

One of the three unique Swedish characters in the alphabet is an o with two dots over it. Unfortunately, this character has the ASCII code 124 (vertical line). This means that whenever an AppleWorks menu or ruler is present I see a column of dotted o's. AppleWorks works nice, but looks bad. Any patches to change it to 'ö' (ASCII 33)?

In Sweden we use a date format that makes it easy for computers to sort dates, YY-MM-DD. In the rest of Europe they use it the other way, DD-MM-YY, also ok for sorting. But the U.S. date format is confusing! Any patches?

Since I do a lot of programming in ZBasic, I would be interested getting their newsletter. Do you now if it is any good or what it costs?

Andreas Wennborg
Goteborg, Sweden

Actually, General Electric's communications network probably extends to Sweden already–it goes all over the world. The trick is getting permission from each individual country to offer the service. GEnie is working on it and expects to have several European countries online before the end of the year. Right now GEnie is available in the U.S., Canada, and Japan. However, we haven't told our Japanese subscribers how to sign up yet, either–but we will as soon as we figure it out.

We don't know how to solve your ASCII 124 problem, but are hoping some readers might.

We published the address of an Australian reader, David Grigg, who devised a patch for the date problem back in June 1987, page 3.39. Now Grigg is the author of a pair of articles in ***Apple User*** *("UpDATEing AppleWorks," April 1988, page 52; May 1988) that describe how to make the date patch in AppleWorks versions 1.2, 1.3, and 2.0. Back issues of* ***Apple User*** *are £1.75 each from Database Publications, Europa House, Adlington Park, Adlington, Macclesfield, Cheshire SK10 4NP, UK 0625-879920. (U.S. dates may be messed up, but how to you Europeans deal with those phone numbers?)*

Zedcor's ***ZBasic*** *newsletter is $19.95 for four quarterly issues. We haven't seen it. However,* ***ZBasic's*** *Apple II programmer Greg Branche is active in A2Pro on GEnie–if the newsletter answers questions as well as he does it's worth it.*

Subdirectory bug fixed at last

Regarding the confusion about how many files AppleWorks 2.0 will allow in a single subdirectory (July 1987, page 3.45; August 1987, page 3.56; February 1988, page 4.6-4.7)–the correct number is 64, but AppleWorks itself doesn't seem to know that.

AppleWorks' internal catalog buffer starts at $7500 and 24 bytes are used for each catalog entry. When files are selected and loaded, the Desktop Organizer uses the work area of the main application segment to transfer the files from disk to desktop. The spreadsheet workarea starts at $7D00, which would leave room for 85 files. However, the word processor and data base workareas start at $7B00, which leaves room for only 64 files.

Therefore, if you try to add a file that's near the end of a directory that has more than 64 files to the desktop, and the file is a word processor or a database file, the catalog entry will be overwritten by the file itself. Most likely the loading routine will encounter a $00 byte at the location of the filename, which it will interpret as a null string, hence the message 'Getting difficulties trying to read "" at ...' and the program falling irretrievably in a heap. If the file is a spreadsheet, on the other hand, it will load without difficulty unless it is beyond the 85th file in the subdirectory.

Fortunately, thanks to Mr. Lissner's disciplined approach to programming, the beginning of the catalog buffer is set by a single pointer. If you can't raise the bridge, lower the river. The following patch adjusts this pointer to $7000, which gives us a capacity of 116 files with no apparent conflict in memory usage. The following patch will make the necessary changes (AppleWorks 2.0, Basic.system 1.1):

```
POKE 768,0   : POKE 769,112 : REM $7000
POKE 770,0   : POKE 771,0   : REM pointer
POKE 772,224 : POKE 773,122 : REM $7AE0
BSAVE SEG.M1,A$300,L6,B$14286
```

If you would also like to change the warning message so that it reads the now-correct '116', then:

```
POKE 768,49 : POKE 769,49 : POKE 770,54
BSAVE SEG.M1,A$300,L3,B$14449
```

John D. Smyth
Blackburn, Vic.

Open-Apple

[redacted]

is written, edited, published, and

with help from
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Dennis Doms Steve Kelly

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Open-Apple
P.O. Box 11250
Overland Park, Kansas 66207 U.S.A.

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